

KEY TO THE NORTH AMERICAN SPECIES OF UTRICULARIA (BLADDERWORTS)

by Katsuhiko Kondo

A. Flower pinkish-purple

B. Plant aquatic; Lateral lobes of the lower lip of corolla
saccate; Bracts peltate1. Utricularia purpurea

B. Plant terrestrial; Lateral lobes of the lower lip of corolla
not saccate; Bracts tubular.....2. Utricularia resupinata

A. Flower yellow (yellow in chasmogamous flower; yellow or yellowish-white in cleistogamous flower)

C. Scales, bracts, bracteoles, and calyx-lobes all fimbriate
.....3. Utricularia fimbriata

C. Scales, bracts, bracteoles, and calyx-lobes not fimbriate

D. Pedicel with one bract and two bracteoles at base

E. Pedicels longer than the bracts; One bract and two
bracteoles associated with each other at base
.....4. Utricularia standleyae

E. Pedicels mostly as long as the bracts; One bract
and two bracteoles each separated at base

F. Scapes green to yellowish-green; Nodes mostly
6-14; Only chasmogamous flower present; Upper
lip mostly 9.1-12.8 mm long; Lower lip mostly
5.6-11.9 mm high; Spur mostly 7.5-13.8 mm long
.....5. Utricularia cornuta

F. Scapes greenish-purple to purple; Nodes mostly
4-32; Both chasmogamous flower and cleistogamous
flower present; Upper lip of chasmogamous flower
mostly 6.0-8.6 mm long; Lower lip mostly 2.6-
5.2 mm high; Spur mostly 4.6-6.5 mm long; Upper
lip of cleistogamous flowers mostly 1.9-3.1 mm
long; Lower lip mostly 0.8-1.4 mm high; Spur
mostly 0.7-2.4 mm long
.....6. Utricularia juncea

D. Pedicel with one bract at base, and no bracteole

G. Bracts and scales peltate; Rachis zigzag when
more than two flowered.....7. Utricularia subulata

G. Bracts and scales not peltate, attached by base; Rachis not zigzag

H. Ovules two, seed one per capsule... 8. Utricularia olivacea

H. Ovules and seeds per capsule numerous

I. Scapes with floats of inflated petioles

J. Racemes 4-17 flowered, mostly 9-14; Spur notched at tip; Bracts longer than broad, never lobed; Chromosome number n = 9 or 18

.....9. Utricularia inflata

J. Racemes 1-7 flowered, mostly 3-4; Spur never notched at tip; Bracts as broad as long or broader, variable with respect to lobing; Chromosome number n = 14

.....10. Utricularia radiata

I. Scapes without floats of inflated petioles

K. Pedicels arched-recurving in fruits; Flowers 6-20 per scape

L. Spur hook-like; Peduncles below the lowest bract, bearing 1-few widely scattered bract-like scales.....11. Utricularia australis (I)

L. Spur not hook-like; Peduncles without scales below the bracts; Cleistogamous flower without lips present12. Utricularia geminiscapa

K. Pedicels ascending in fruits; Flowers 6 or fewer per scape

M. Plant free floating with subterranean branches without foliar unit, only bladders present

N. Pyramiddal spur, positioned at a right angle to the lower lip13. Utricularia ochroleuca

N. Cylindrical spur, positioned at an acute angle to the lower lip
14. Utricularia intermedia

M. Plant forming mats in shallow water, subterranean branches absent

O. Lower lip about twice as long as the upper lip; Bracts purple auriculate; Spur less than 1/2 the length of the lower lip, saccate.....15. Utricularia minor

O. Lower lip equalling the upper lip, upper lip not lobed; Bracts not purple, semi-amplexicaulous; Spur almost as long as the lower lip

P. Lower lip 5-6 mm long.....16. Utricularia gibba (II)

P. Lower lip 8-10 mm long

Q. Scapes 10-40 cm tall;

R. Scapes erect; Corolla 15-20 mm wide
.....17. Utricularia fibrosa (II)

R. Scapes flexuous; Corolla 12-15 mm wide
.....18. Utricularia floridana(II)

Q. Scapes 5-12 cm tall.....19. Utricularia biflora (II)
(III)

(I). Utricularia australis includes U. macrorhiza and U. vulgaris which are synonyms (see Peter Taylor. Bull. Jard. Bot. Nat. Belg. 41: 269-272. 1971).

(II). Since Utricularia fibrosa, U. biflora, U. gibba, and U. floridana form a complex, it should be careful to key out them.

(III). Utricularia biflora includes U. pumila which is a synonym now.

GLOSSARY :

Cleistogamous flower = A type of self-pollinated flower that does not open

Chasmogamous flower = A normal open flower

Explanation of the figure

A. Tubular bract of Utricularia resupinata

B. Side view of corolla with horizontal spur of Utricularia resupinata

C. Peltate bract of Utricularia purpurea

D. Flower of Utricularia purpurea with saccate-shaped lower lip of corolla

E. Flower of Utricularia fimbriata: calyx and a pair of bractlets are present; scales, bracts, bracteoles, and calyx-lobes are all fimbriate forms

F. Scale of Utricularia cornuta and U. juncea

G. Pedicel with a bract and two bracteoles at base in Utricularia cornuta and U. juncea

H. Scale of Utricularia standleyae

I. Pedicel with a bract and two bracteoles at base in Utricularia standleyae

J. Peltate bract of Utricularia subulata

K. Flower of Utricularia subulata

L. Bract of Utricularia gibba

M. Bracts of Utricularia inflata

N. Scale of Utricularia fibrosa

O. Flower of Utricularia cornuta

P. Cleistogamous flower of Utricularia juncea

Q. Chasmogamous flower of Utricularia juncea

